

REMARKS

Claims 1-7 and 9-21 are pending in this application after entry of this Amendment. Claims 1-20 stand rejected. Claim 8 has been canceled without prejudice or disclaimer of the subject matter therein. Claim 21 is newly added. It is respectfully submitted that the pending claims define allowable subject matter.

The drawings, specifically Figures 3-11 are objected to as being virtually impossible to differentiate what is being disclosed. Applicant respectfully traverses this objection. Applicant submits that one of ordinary skill in the art would be able to determine what is being illustrated in each of Figures 3-11. Applicant has reviewed Figures 3-11 and each appears to be clear with reference characters and lead lines pointing to the corresponding images or features. If the objection is maintained, Applicant respectfully requests the Examiner to provide a specific objection identifying the difficulty the Examiner is having when viewing Figures 3-11 and relative to the described embodiments of the invention. Accordingly, Applicant respectfully requests the Office withdraw the objection to the drawings.

Claims 2-7, 10, 14 and 15 have been objected to for failing to further limit the computer program product and appear to be directed toward the intended use of the product. Applicant respectfully traverses this objection. As an example, claim 2 further recites that the body organ is a fetal heart. Accordingly, the computer program product of claim 2 comprises instructions for enabling a computer to acquire ultrasound image data for at least a portion of a fetal heart. Thus, the claimed invention is further limited. As another example, claim 3 further recites that the reference plane is a four-chamber view. Again, the computer program product of claim 3 now comprises instructions for enabling a computer to generate and define at least one other plane with respect to a four-chamber view reference plane. Thus, the claimed invention is further limited. Applicant submits that further limitations are provided in claims 3-7, 10, 14 and

15 in a similar manner. Thus, Applicants submits that the objection to claims 2-7, 10, 14 and 15 should be withdrawn.

Claims 1-20 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-6 and 18-20 of co-pending Application No. 11/089,040. Applicant notes the provisional rejection and traverses the rejection. Moreover, Applicant will respond accordingly when the rejection is no longer provisional (and the Office provides a specific non-provisional rejection) or the rejection is the only remaining rejection in the application.

Claims 19 and 20 have been rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the enablement requirement. Applicant respectfully traverses this rejection. The Office Action asserts that while the specification discloses using formulas, none are provided and that the tables in the application as filed show shifts and rotations for different planes. Applicant submits that a formula can be, for example, a way to express a relationship between quantities. Accordingly, and for example, as shown in Table 1 of the application as filed, each row of the table includes a formula for a plurality of defined views using the relationship (including a shift and rotation) from a four-chamber view. Thus, Applicant submits that claims 19 and 20 are enabled and the rejection should be withdrawn.

Claims 18 and 20 have been rejected under 35 U.S.C. § 112, first paragraph as failing to comply with the written description requirement. Applicant respectfully traverses this rejection. The Office Action asserts that with respect of claim 18 a spatial mathematical relationship is not shown based on statistically generated data and with respect to claim 20 that the formula is not pre-set. With respect to claim 18, the application as filed describes, for example, at paragraph 0020 that the constant anatomic relationship of the standardized planes to each other may be based on the gestational age of the fetus. Accordingly, and as one example, the relationship may be based on the statistic of gestational age. With respect to claim 20, similar to the discussion above, the other planes may be generated based on a mathematical relationship determined for a

gestational age of a fetus. Thus, the relationship, and accordingly the formula, is not pre-set. Thus, Applicant submits that the rejections to claims 18 and 20 should be withdrawn.

Claim 18 has been rejected under 35 U.S.C. § 112, second paragraph as being indefinite as unclear with respect to the recitation of “statistically based.” Applicant respectfully traverses this rejection. Applicant submits, as discussed in more detail above, that the recitation of statistically based is clear from the specification as filed. Thus, Applicant submits that the rejection to claim 18 should be withdrawn.

Claims 1-20 have been rejected under 35 U.S.C. § 112, second paragraph as being incomplete for omitting an essential step correlating the acquired ultrasound image data with the other planes with respect to a reference plane. Applicant respectfully traverses this rejection. The claims recite generating and defining ... for the body organ... The generating and defining are for ultrasound image data is acquired for the body organ. The acquired data for the body organ correlates to the planes from the image data for the body organ that are generated. Thus, Applicant submits that the rejection to claim 1-20 should be withdrawn.

Claims 1, 7, 8 and 14-20 have been rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,669,641 (Poland). Claims 2-6 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Poland in view of U.S. Patent No. 6,669,641 (Winder). Claims 9-11 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Poland in view of U.S. Patent No. 6,290,648 (Kamiyama et al.), hereafter Kamiyama. Claims 12 and 13 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Poland in view of U.S. Patent No. 5,454,371 (Fenster et al.), hereafter Fenster. Applicant respectfully traverses these rejections for at least the reasons set forth below.

Independent claim 1 has been amended to recite a computer program product residing on a computer readable medium, for use in a medical-imaging environment, the computer program product comprising instructions for enabling a computer to, among other things “generate and define at least one other plane with respect to a reference plane for the body organ based on body

organ specific data of a relationship of the at least one other plane to the reference plane, the at least one other plane being a standardized plane.” Applicant submits that the cited Poland reference fails to teach or suggest such a computer program product.

The Poland reference describes a method of ultrasound imaging that allows a user to tilt or rotate an acquired image plane to a different view. The tilted plane is oriented with respect to another plane and an icon is provided to identify the amount of tilt or rotation. A standardized plane is not generated from one of the acquired image planes. The titled plane is not a standardized plane and is generated based on a user defined amount of tilt or rotation of the plane itself. Moreover, and in contrast to the claimed invention, one other plane that is a standardized plane is not generated and defined with respect to a reference plane for the body organ *based on body organ specific data of a relationship* of the at least one other plane to the reference plane. Nothing in the cited Poland reference uses a relationship of the planes based on data specific to a particular organ. The tilted or rotated image planes of Poland are based on a user defined tilt or rotation and the system of Poland does not generate other planes, particularly standardized planes. Thus, Applicant submits that claim 1 is allowable.

Independent claim 16, as amended, recites a method including, among other elements “generating and defining at least one other plane with respect to a reference plane for the body organ using and a spatial mathematical relationship of the at least one other plane to the reference plane for the body organ.” Independent claim 17, as amended, recites a system including, among other elements “a processor for processing the ultrasound image data to define a reference plane for the body organ and to generate and define at least one other plane with respect to the reference plane using a spatial mathematical relationship of the at least one other plane to the reference plane for the body organ.” The Office Action asserts at page 6 that the Poland reference teaches generating and defining at least one other plane with respect to the reference plane using a spatial mathematical relationship.

The Poland reference describes at column 4, lines 51-67 that the acquired planar images when taken as slices through a body have known geometric relationships to each other. The

relationships of the planes are based on where the planes were acquired. Applicant submits that an additional plane is not generated using a *spatial mathematical relationship for the body organ*. The geometric relationship is based on where one plane was acquired relative to another plane. The relationship has nothing to with a body organ as recited in the claimed invention. Thus, Applicant submits that claims 16 and 17 are allowable.

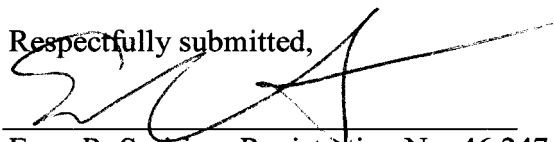
Turning to the dependent claims, Applicant submits that dependent claims 2-7, 9-15 and 18-20 and newly added claim 21 recite further subject matter that is not anticipated or rendered obvious by the cited references. Moreover, Applicant submits that the Winder, Kamiyama and Fenster references fail to make up for the deficiencies in the Poland reference. Additionally, claims 2-7, 9-15 and 18-21 depend from claim 1. Consequently, because claim 1 defines allowable subject matter, claims 2-7, 9-15 and 18-21 also define allowable subject matter.

Furthermore, there may be additional reasons other than those described herein or herebefore that claims 1-7 and 9-21 are each patentable over the cited references. Without waiver of such additional reasons, Applicant reserves the right to argue such reasons hereafter.

In view of the foregoing amendments and remarks, it is respectfully submitted that the cited references neither anticipate nor render obvious the claimed invention and the pending claims in this application are believed to be in condition for allowance. Reconsideration and favorable action is respectfully solicited. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the telephone number listed below.

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Respectfully submitted,



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